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ABSTRACT

Many preschool children with developmental delays in cognition and language are in the preoperational stage as defined by Jean Piaget's theory of cognitive development. The preoperational stage is divided into the preconceptual and the intuitive phases. During the preconceptual phase, the preschooler is unable to form true concepts and often reasons in the form of unrelated judgement without logical organization. In the intuitive phase, the child's reasoning is tied to his perceptions and therefore his thinking is often distorted. Implications for parents and teachers are that in a special preschool class, activities should be of a wide variety and should include exploring with all the senses (such as imitating the actions of people, animals and objects); that at home, parents can emphasize real experiences (including planting seeds and cooking); and parents and teachers should use language related to what the child is experiencing as well as to his general level of language functioning. (SB)

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PIAGET'S PREOPERATIONAL STAGE OF DEVELOPMENT AND APPLICATIONS FOR SPECIAL PRESCHOOLERS

Barbara Lowenthal

The eminent psychologist Jean Piaget distinguishes different periods of intellectual development as a child progresses from sensory and concrete learning during his first two years of life to a more complex level of abstraction in his adolescent years. A brief summary of these periods as described by Hamachek is as follows: The first stage is the sensorimotor period of development which ranges from birth to two years during which intelligence is demonstrated by the infant in his actions. The basic characteristics of this stage are that a baby learns he is different from other objects, and his learning is primarily through his senses and manipulations.[1]

The next period is labeled the preoperational stage which ranges from approximately two years to seven years and is subdivided into the preconceptual phase and the intuitive phase. During the preconceptual stage (2 to 4 years), the child is egocentric and is unable to see things from another person's point of view. In the intuitive phase (4 to 7 years), the preschooler begins to see simple relationships and classifications. He is "intuitive" because even though he is capable of making classifications, he doesn't understand why or how. The next stage is called the period of concrete operations (7 to 11 years) in which the youth grows in his ability to act in thought on concrete objects. He can consciously use and understand logical operations such as classification, seriation or ordering according

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to size or weight, and reversibility. The last period of intellectual development is the formal operations stage in which the adolescent (11 years to 15 years) further develops his ability to comprehend abstract concepts, cause-effect relationships, and to think about the future.

Many preschool children, who are special because of their developmental delays in cognition and language, are in the preoperational stage of intellectual growth. The following description is a more detailed explanation of mental development at this period. Afterwards, there will be some applications made from Piaget's theory as well as recommendations of appropriate activities for these special preschoolers to assist them at this level in their intellectual functioning. During the first part of the preoperational period, the preconceptual phase, the child develops an ability for representation, imitation, and language. A schema, or unit of thought, can now be symbolic; the two year old can pretend a stick is a candle and blow it out. Hunt states that the child devotes much of his time to imitation and symbolic play.[2]

Although this ability for representation enables the preschooler to use language, to interpret and draw pictures, and to play symbolic games, he is still unable to form true concpets because he can't assign a word to one class of objects. As Beard explains, the same person may be seen in the mind of a child as a number of distinct people according to the clothes he wears or place he occupies; therefore the preschooler will label the same person by different names.[3] Another difficulty in his thinking is that he often reasons in the form of unrelated judgments without any logical organization; for example, he might say, "A large boat floats because it is heavy" and then insist, "A small boat floats because it is light." Piaget defines

this type of reasoning as transduction. The youngster also uses syncratic thinking in which he links unrelated things together and finds a reason for every chance event. In addition, he will insist that all natural events are caused by people and that objects have lives and feelings of their own, an example of animistic thinking.

In the last part of the preoperational stage, the intuitive phase, the child's reasoning is tied to his perceptions. Therefore his thinking is often distorted as a perception of an object can change from moment to moment. The preschooler is unable to keep in his mind more than one relationship at a time. He makes no effort to stick to one opinion on a particular subject as he forgot his previous beliefs. He may reverse an order of events such as saying, "I lost my crayon because I'm not coloring." The youngster can't understand relational terms such as darker, larger, and bigger. He tends to think in absolute terms such as, for example, interpreting darker as meaning very dark rather than darker than another object. The preschooler cannot reason simultaneously about the whole of an object and its parts. He also has difficulty with arranging objects by weight or size in a serial order. Another deficiency in his thinking is his inability to conserve as he does not believe that liquids and solids can be changed in shape without altering their size or amount. For example, if water is poured from a short, broad glass into a tall, thin one, the child will insist that the water has changed in amount.

Mussen, Conger and Kagan explain that in this intuitive phase of development, a child's thinking is egocentric as he is unable to see things from anotner person's point of view.[4] However, in comparison to the previous preconceptual stage, games of pretend are not as popular and the preschooler prefers to imitate reality such as playing games of "house." He

thinks of rules in a game as absolute and that it would be cheating to change them. Moral judgments are also absolute and if he is naughty, the consequences of his act are more important than his intentions. It is also considered worse to tell lies to an adult rather than to a child and worse to tell a lie that is incredible than to tell one that can be believed. Retributive justice is often recommended as punishment during this developmental stage.

What are the implications for parents and teachers from this preoperational period of intellectual development? According to Beard, Piaget's most important assumption is that all knowledge is derived from action which the child performs on objects and then organizes in his brain. A preschooler, with or without a developmental delay in cognition or language, cannot learn by sitting passively in his seat. Therefore in the special preschool class, there should be provision for a wide variety of activities: extensive play areas with large toys such as tricycles, wagons, trucks, climbing equipment, and large building blocks in which the preschoolers can learn spatial relationships and control of their actions; many small toys and games to be used in construction and for sorting, grouping, and counting such as pegboards, puzzles, beads, parquetry, small blocks, lotto, and domino sets; a domestic house corner with clothes for acting and role playing so necessary for the preconceptual and intuitive phases; and water, sand, clay, play dough, paints, and other drawing materials to give experiences for as much representation and construction as possible, necessities for the preconceptual stage. Banet et al. feel these activities also should include exploring with all the senses such as discovering the properties of objects, materials, and living things, moving one's whole body in various ways (jumping, running, etc.), taking things apart and putting them back together, imitating the actions of

people, animals, and objects, and carrying out a self-made plan.[5]

At home, parents can emphasize real experiences for their special preschoolers such as planting indoor or outdoors, looking at seeds, planting them, using real garden tools, watering plants, and observing the growth process. All kinds of trips, as suggested by Nederveld and Thomson, can be utilized in assisting the child's learning such as excursions to the pet store to look at animals, feel their skin and fur, see how they move and what they eat and drink; trips to the fire station and police station to see fire trucks and police cars, to listen to the sirens, and see where the men sleep and eat; trips to the airport, bus and train stations to ride on vehicles, see how big they are, and feel their surfaces.[6]

Cooking activities are important to emphasize such as making cookies, cakes, instant pudding, fruit salad, peanut butter, jello, soup, and play dough; the child should smell, taste, feel, see, label, and hear the sounds of the ingredients while he assists his parent in the preparation of the recipes. Seasonal activities such as buying a pumpkin for Halloween can be an active learning experience for the preschooler if he is allowed to scoop out the pumpkin, identify its seeds, feel its mushiness, taste and smell it, roast pumpkin seeds, and make pumpkin pudding and pie. Similarly, the family car can be a learning experience if the child is allowed to get inside, walk around it, look underneath, and is assisted in identifying its various parts (body, tires, grille, etc.). The telephone can serve a useful function if the youngster is given the chance to dial and talk to other people and identify the main parts of the instrument.

To encourage language development both at home and at school, the preoperational child with language delay must be an active participant in

expanding his communication skills; he needs concrete language experiences. In the preconceptual phase, the preschooler should participate in unstructured games and activities such as playing with sand and water which precede conceptual development. The teacher and parent should comment and label the child's experiences and provide the stimuli for his verbal responses. What the adult does, as explained by Weikart, essentially is to "feed in language" to the child while he is engrossed in an activity, expressing a feeling, or responding to specific situations.[7] The language used by the teacher and parent should relate to what the child is experiencing as well as to his general level of language functioning.

In the intuitive phase, when the youngster is trying to bring his intuitions in relationships with reality, he needs many opportunities for discussions. The adult's responsibility is to take the time to understand the child's questions and to explain to him the reasons for his actions. At this stage of language development, the goal should shift from identifying for the child what he is experiencing to gradually allowing the youngster to interpret, evaluate, and make sense out of his own experiences. This often can be done through questioning. The objective of this questioning, however, is not for the child to make some verbal response but to help him organize facts and seek relationships between these facts about the world that he has learned through his activity.

There are also some socio-emotional objectives which are suggested for the parent and teacher from this description of Piaget's preoperational stage of development. These goals are: A child should be encouraged to listen to others including his peers and to exchange opinions which will lead eventually to less egocentric thinking. The preschooler with cognitive

developmental delay should have the opportunity to control his own behavior as much as possible rather than being controlled by adults. To help him with this control, he needs encouragement to make his own plans and decisions, to carry them out, and to evaluate them. In addition, the youngster can be reinforced in his feelings of curiosity, self confidence, and in his divergent, creative thinking. The preoperational child, if allowed to be curious, active, confident, resourceful, and eager to exchange opinions with other children and adults, will gain the affective readiness to progress to his next stage of intellectual development.

Conclusion

In summary, the special preschooler with developmental delays in language and cognition is often in the preoperational stage of intellectual growth, as described in Piaget's theory of cognitive development. This stage is subdivided into the preconceptual phase and the intuitive phase. During the preconceptual period, language and the ability for representation develop in the child. His thinking is egocentric as he is unable to assume another person's point of view. In the intuitive phase, the youngster is slowly beginning to think in terms of classes and to see simple relationships. He is "intuitive" because even though he is capable of making classifications, he doesn't understand why or how. Implications of this preoperational period for parents and teachers would stress the role of direct experiences for the child so that he can derive knowledge from his actions and organize this information in his brain. According to Piaget, as related by Pulaski,[8] "Children have real understanding only of what they invent themselves, and each time we try to teach them something too quickly, we keep them from reinventing it themselves" [p. 197].

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